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SENATE

REPORT
100-283

GEOTHERMAL STEAM ACT AMENDMENTS

FEBRUARY 4 (legislative day, FEBRUARY 2), 1988.—Ordered to be printed

Mr. JOHNSTON, from the Committee on Energy and Natural Resources, submitted the following

REPORT

[To accompany S. 1889]

The Committee on Energy and Natural Resources, to which was referred the bill (S. 1889) to amend the Geothermal Steam Act of 1970 to provide for lease extensions, and for other purposes, having considered the same, reports favorable thereon with amendments to the text and recommends that the bill, as amended, do pass.

The amendments are as follows:

1. Page 1, line 5, delete "subsection is" and insert in lieu thereof "subsections are", and page 2 after line 5, insert:

> (g) "significant thermal features within units of the National Park System" shall include, but not be limited to, the following:
>
> (1) thermal features within units of the National Park System designated as significant in the Federal Register notice of August 3, 1987 (Vol. 52, No. 148 Fed. Reg. 28790); and
>
> (2) Crater Lake National Park.".

2. Page 2, line 7, delete (30 U.S.C. 1005(a))" and insert in lieu thereof "(30 U.S.C. 1005)".

3. Page 2, line 22, delete "of 1987".

4. Page 5, line 1, delete all through page 7, line 15, and insert the following:

> SEC. 7. The Geothermal Steam Act of 1970, as amended, (30 U.S.C. 1001-1025) is amended by adding the following new section 28:

S313-1

"SEC. 28. (a) The Secretary shall maintain a monitoring program for significant thermal features within units of the National Park System.

"(b) As part of the monitoring program required by subsection (a) of this section, the Secretary shall establish a research program to collect and assess data on the geothermal resources within units of the National Park System with significant thermal features. Such program shall begin with the collection and assessment of data for significant features near current or proposed geothermal development.

"(c) Upon receipt of an application for a geothermal lease the Secretary shall determine on the basis of scientific evidence if exploration, development, or utilization of the lands subject to the geothermal lease application is reasonably likely to result in a significant adverse effect on a significant thermal feature within units of the National Park System. Such determination shall be subject to notice and public comment. If the Secretary determines on the basis of scientific evidence that the exploration, development or utilization of the land subject to the geothermal lease application is reasonably likely to result in a significant adverse effect on a significant thermal feature within units of the National Park System, the Secretary shall not issue such geothermal lease. In addition, the Secretary shall withdraw from leasing under this Act those lands, or portion thereof, subject to the application for geothermal lease, the exploration, development, or utilization of which is reasonably likely to result, based on the Secretary's determination, in a significant adverse effect on a significant thermal feature within units of the National Park System.

"(d) With respect to all geothermal leases and drilling permits issued, extended, renewed or modified, the Secretary shall include stipulations in leases and in drilling permits necessary to protect significant thermal features within units of the National Park System where a determination is made based on scientific evidence that the exploration, development, or utilization of the lands subject to the lease or drilling permit is reasonably likely to adversely affect such significant features. Such stipulations shall include, but are not limited to:

"(1) requiring the lessee to reinject geothermal fluids into the rock formations from which they originate;

"(2) requiring the lessee to report annually to the Secretary on its activities;

"(3) requiring the lessee to continuously monitor geothermal production and injection wells; and

"(4) requiring the lessee to suspend activity, temporarily or permanently, on the lease if the Secretary determines that ongoing exploration, development, or utilization activities are having a significant adverse effect on significant thermal features within units of

the National Park System until such time as the significant adverse effect is eliminated.

"(e) The Secretary of Agriculture shall consider the effects on significant thermal features within units of the National Park System in determining whether to consent to leasing under this Act on national forest or other lands administered by the Department of Agriculture available for leasing under this Act, including public, withdrawn, and acquired lands.".

SEC. 8. (a) The United States Geological Survey, in consultation with the National Park Service, shall conduct a study of the impact of present and potential geothermal development in the vicinity of Yellowstone National Park on the thermal features within Yellowstone National Park. The area to be studied shall be the lands within the Corwin Springs Known Geothermal Resource Area as designated in the July 22, 1975 Federal Register (Fed. Reg. vol. 40 No. 141). The study shall be transmitted to Congress no later than December 1, 1990.

(b) Any production from existing geothermal wells or any development of new geothermal wells or other facilities related to geothermal production is prohibited in the Corwin Springs Known Geothermal Resource Area until one hundred and eighty days after the receipt by Congress of the study provided for in subsection (a) of this section.

(c) If the Secretary determines that geothermal drilling and related activities within the area studied pursuant to subsection (a) of this section may adversely affect the thermal features of Yellowstone National Park, the Secretary shall include in the report required under subsection (a) of this section recommendations regarding the acquisition of the geothermal rights necessary to protect such thermal resources and features.

(d) The Secretary may not issue, extend, renew, or modify any geothermal lease or drilling permit pursuant to the Geothermal Steam Act of 1970 (30 U.S.C. 1001–1025) in the Corwin Springs Known Geothermal Resource Area until one hundred and eighty days after the receipt by Congress of the study provided for in section 8(a) of this Act. This section shall not be construed as requiring leasing subsequent to the one hundred and eighty days after study submittal.

SEC. 9. The Geothermal Steam Act of 1970, as amended (30 U.S.C. 1001–1025), is amended by adding the following new section 29:

"SEC. 29. Nothing contained in this Act shall affect the ban on leasing under this Act with respect to the Island Park Geothermal Area, as designated by the map in the "Final Environmental Impact Statement of the Island Park Geothermal Area" (January 15, 1980. p. XI), and provided for in Public Law 98–473".

SEC. 10. To the extent that any provision in this Act is inconsistent with the provisions of section 115(2) of Title I of section 101(h) of the Act Making Continuing Appropria-

tions for Fiscal Year 1987, Public Law 99-591, 100 Stat. 4431-264 through 100 Stat. 4431-266, this Act shall be deemed to supersede the provisions of section 115(2) of Title I of section 101(h) of the Act Making Continuing Appropriations for Fiscal Year 1987, Public Law 99-591, 100 Stat. 3341-264 through 100 Stat. 3341-266.

Purpose of the Measure

S. 1889, as recommended by the Committee, amends the Geothermal Steam Act of 1970, as amended (30 U.S.C. 1001-1025), to provide for extensions of the primary term of geothermal leases. The bill designates certain thermal features within the National Park System as significant thermal features to be protected under the Geothermal Steam Act of 1970. S. 1889 also provides for a study of the impact of present and potential geothermal development in the Corwin Springs Known Geothermal Resource Area (Corwin Springs KGRA) on the thermal features of Yellowstone National Park. Any geothermal development in Corwin Springs KGRA is prohibited by S. 1889 until 180 days after completion of the study.

Background and Need

The Geothermal Steam Act of 1970 (30 U.S.C. 1001-1025) provides that Federal lands may be leased for purposes of production of geothermal steam. Geothermal leases are for a primary term of 10 years. If geothermal steam is produced or utilized in commercial quantities within this term, such lease shall continue for so long thereafter as geothermal steam is produced or utilized in commercial quantities, but such continuation shall not exceed an additional 40 years. If, at the end of such 40 years, steam is produced or utilized in commercial quantities and the lands are not needed for other purposes, the lessees shall have a preferential right to a renewal of such lease for a second 40-year term.

Under the Geothermal Steam Act of 1970, any lease for land on which, or for which under an approved cooperative or unit plan of development or operation, actual drilling operations were commenced prior to the end of its primary term and are being diligently prosecuted at that time, shall be extended for 5 years and so long thereafter, but not more than 35 years, as geothermal steam is produced or utilized in commercial quantities. If, at the end of such extended term, steam is being produced or utilized in commercial quantities and the lands are not needed for other purposes, the lessee shall have a preferential right to a renewal of such lease for a second term in accordance with such terms and conditions as the Secretary deems appropriate.

Production or utilization of geothermal steam in commercial quantities is defined under current law to include the completion of one or more wells producing or capable of producing geothermal steam in commercial quantities and a bona fide sale of such geothermal steam.

Section 115(1) of Title I of Section 101(h) of the Act Making Continuing Appropriations for Fiscal Year 1987, Public Law 99-591, 100 Stat. 4431-264; provided for an extension of the primary term of any geothermal lease in effect as of July 27, 1984 until Decem-

ber 31, 1988, where the Secretary of the Interior makes certain findings.

There currently are approximately 850 geothermal leases on Federal lands, 25 of which are in production. Under current law, 60 leases will expire by the end of 1988.

The Geothermal Steam Act of 1970 prohibits geothermal leasing on federal lands within the boundaries of all units of the National Park System. However, concerns have been raised that geothermal development on lands in proximity to units of the National Park System may damage nationally significant thermal features within the System.

Because of this concern, section 115(2) of Title I of Section 101(h) of the Act Making Continuing Appropriations for Fiscal Year 1987, Public Law 99-591, 100 Stat. 4431-264 through 100 Stat. 4431-266; contained provisions directing the Secretary of the Interior to publish a list of significant thermal features within 22 units of the National Park System and prohibited the Department of the Interior from issuing geothermal leases until the Secretary transmitted the required list to Congress.

On February 13, 1987, the National Park Service (NPS) proposed the list of significant features in the Federal Register. The final list was transmitted to Congress on June 30, 1987, and consists of significant thermal features within 13 of the 22 park units specified by the 1987 Continuing Resolution, as follows:

Mount Rainier National Park (Washington)
Yellowstone National Park (Wyoming, Montana, Idaho)
John D. Rockefeller, Jr. Memorial Parkway (Wyoming)
Bering Land Bridge National Preserve (Alaska)
Gates of the Arctic National Park and Preserve (Alaska)
Katmai National Park (Alaska)
Aniakchak National Monument and Preserve (Alaska)
Wrangell St. Elias National Park and Preserve (Alaska)
Lake Clark National Park and Preserve (Alaska)
Hot Springs National Park (Arkansas)
Lassen Volcanic National Park (California)
Hawaii Volcanoes National Park (Hawaii)
Haleakala National Park (Hawaii)

The Secretary deferred determination of whether Crater Lake National Park should be included on the list, pending further study of hydrothermal activity in the lake. While the Secretary indicated that no additional geothermal leases for lands surrounding Crater Lake National Park will be issued until a final decision is made on the listing, concern remains about the effects of geothermal development outside the park boundary on the water quality and clarity of Crater Lake.

Additional language in the 1987 Continuing Resolution provided that if the Secretary determines that leasing is reasonably likely to result in a significant adverse effect on listed significant thermal feature, leasing will not occur, and the lands will be withdrawn from geothermal leasing. With respect to geothermal leases issued after enactment of the 1987 Continuing Resolution, the Secretary must suspend activity on a lease or include protective stipulations in a lease where the Secretary determines that activity is having

or is likely to have a significant adverse effect on a listed significant thermal feature.

Legislative History

Geothermal leasing bills containing language to protect thermal resources in units of the National Park System were introduced in the 96th and 97th and 98th Congresses. One such bill was reported favorably by the Energy and Natural Resources Committee during the 96th Congress but failed to be enacted into law.

Section 115 of Title I of section 101(h) of the Act Making Continuing Appropriations for Fiscal Year 1987, Public Law 99-591, 100 Stat. 4431-264 through 100 Stat. 4431-266; provides for temporary lease extensions until December 31, 1988, requires that the Secretary of the Interior publish a list of significant thermal features within 22 units of the National Park System, and provides for protection of the listed features.

On April 9, 1987, Senator Hecht introduced S. 1006, and hearings were held by the Subcommittee on Mineral Resources Development and Production on the bill on July 14, 1987. Senator Melcher introduced S. 1889 on November 20, 1987. The Committee on Energy and Natural Resources considered S. 1889 at a business meeting on January 27, 1988, and ordered reported S. 1889, as amended by the Committee, by a vote of 19-0.

Committee Recommendation and Tabulation of Votes

The Senate Committee on Energy and Natural Resources in open business session on January 27, 1988, by a unanimous vote of a quorum present recommends that the Senate pass S. 1889, as amended. The roll call vote on reporting the measure was 19 yeas, 0 nays as follows:

YEAS	NAYS
Mr. Johnston	
Mr. Bumpers	
Mr. Ford	
Mr. Metzenbaum *	
Mr. Melcher	
Mr. Bradley *	
Mr. Bingaman *	
Mr. Wirth *	
Mr. Fowler	
Mr. Conrad	
Mr. McClure	
Mr. Hatfield	
Mr. Weicker *	
Mr. Domenici *	
Mr. Wallop *	
Mr. Murkowski *	
Mr. Nickles	
Mr. Hecht	
Mr. Evans	

* Indicates proxy vote.

COMMITTEE AMENDMENTS

Committee amendment 1 adds Crater Lake National Park to the list of significant thermal features within the National Park System.

Committee amendment 2 is technical.

Committee amendment 3 is technical.

Committee amendment 4 is technical and incorporates the geothermal park protection language of section 115 of Title I of section 101(h) of the Act Making Continuing Appropriations for Fiscal Year 1987, Public Law 99-591, 100 Stat. 4431-264 through 100 Stat. 4431-266; into the Geothermal Steam Act of 1970 (30 U.S.C. 100-1025).

SECTION-BY-SECTION ANALYSIS

Section 1 of the bill sets forth the short title.

Section 2 of the bill adds two new subsections to section 2 of the Geothermal Steam Act of 1970. Subsection 2(f) defines "substantial investment", and subsection 2(g) defines "significant features within units of the National Park System."

Section 3 of the bill amends section 6 of the Geothermal Steam Act of 1970, as amended, by striking subsection (a) and inserting a new subsection (a) which provides that geothermal leases shall be for a primary term of 10 years. If geothermal steam is produced or utilized in commercial quantities within the 10-year term, or any administrative extension thereof, the lease shall continue for so long thereafter as geothermal steam is produced or utilized in commercial quantities, but such continuation shall not exceed an additional 40 years.

Section 4 of the bill adds a new paragraph 6(c)(2) which provides that certain geothermal leases shall be extended for successive 5-year periods, but totaling not more than 15 years, if: (i) the lessee has submitted a report to the Secretary detailing bona fide efforts to bring the lease or approved cooperative or unit plan of development into commercial production, given then current economic conditions; and either (ii) actual drilling operations, to a depth specified by the Secretary, were commenced prior to the end of the primary term and prior to the end of each successive 5-year extension period and such drilling operations have not been used in obtaining a prior extension on any other lease and are being actively pursued on the lease to be extended or on another lease where, at the time application for extension is made and such drilling occurs, such leases are included in the same approved cooperative or unit plan of development or operation; or (iii) in the opinion of the Secretary, substantial investment has been made during the primary term and during each successive 5-year extension on such lease or on another lease where, at the time the substantial investment is made, such leases are included in the same approved cooperative or unit plan of development or operation and such expenditures have not been used to obtain an extension on any other lease.

Section 5 of the bill amends subsection 6(d) of the Geothermal Steam Act of 1970 by striking subsection 6(d) and inserting in lieu thereof a new subsection 6(d) which provides that for the purpose of subsection 6(a), the term "produced or utilized in commercial

quantities" includes the completion of a well capable of producing geothermal steam in commercial quantities.

Section 6 of the bill amends section 18 of the Geothermal Steam Act of 1970 by inserting a new paragraph which provides that no more than 5 years after approval of any cooperative or unit plan of development or operation, and at least every 5 years thereafter, the Secretary shall review each such plan and, after notice and opportunity for comment, eliminate from inclusion in such plan any lease or part of a lease not regarded as reasonably necessary to cooperative or unit operations under the plan. Such elimination is to be based on scientific evidence, and occur only when it is determined by the Secretary to be for the purpose of conserving and properly managing the geothermal resource. Any lease or part of a lease eliminated from inclusion in a plan would be eligible for an extension under subsection 6(c) within 2 years if it separately meets the requirements for such an extension.

Section 7 of the bill amends the Geothermal Steam Act of 1970 by adding a new section 28.

Subsection 28(a) provides that the Secretary shall maintain a monitoring program for significant thermal features within units of the National Park System.

Subsection 28(b) provides that as part of the monitoring program required by subsection (a) the Secretary shall establish a research program to collect and assess data on the geothermal resources within units of the National Park System with significant thermal features. The program is to begin with collection and assessment of data for significant features near current or proposed geothermal development.

Subsection 28(c) provides that upon receipt of an application for a geothermal lease, the Secretary shall determine on the basis of scientific evidence if exploration, development, or utilization of the lands subject to a geothermal lease application is reasonably likely to result in a significant adverse effect on a significant thermal feature within units of the National Park System. If the Secretary determines on the basis of scientific evidence that such activity is reasonably likely to result in a significant adverse effect on a significant thermal feature, the Secretary shall not issue such geothermal lease, and the Secretary shall withdraw from leasing those lands subject to such lease application.

Subsection 28(d) provides that, with respect to all geothermal leases and drilling permits issued, extended, renewed or modified, the Secretary shall include certain stipulations in leases and in drilling permits necessary to protect significant thermal features within units of the National Park System where a determination is made based on scientific evidence that the exploration, development, or utilization of the lands subject to the lease or drilling permit is reasonably likely to adversely affect such significant features.

Subsection 28(e) provides that the Secretary of Agriculture is to consider the effects on significant thermal features within units of the National Park System in determining whether to consent to geothermal leasing on national forest or other lands administered by the Department of Agriculture available for leasing under the

Geothermal Steam Act of 1970, including public, withdrawn, and acquired lands.

Subsection 8(a) of the bill provides that the U.S. Geological Survey, in consultation with the National Park Service, shall conduct a study of the impact of present and potential geothermal development in the vicinity of Yellowstone National Park. The area to be studied shall be the lands within the Corwin Springs Known Geothermal Resource Area as designated in the July 22, 1975 Federal Register (Fed. Reg. Vol. 40 No. 141). The study shall be transmitted to Congress no later than December 1, 1990. It is the intent that no drilling is to be conducted in conjunction with the study.

Subsection 8(b) of the bill provides that any production from existing geothermal wells or any development of new geothermal wells or other facilities related to geothermal production is prohibited in the Corwin Springs Known Geothermal Resource Area until 180 days after the receipt by Congress of the study provided for in subsection 8(a).

Subsection 8(c) of the bill provides that if the Secretary determines that geothermal drilling and related activities within the area studied pursuant to subsection 8(a) may adversely affect the thermal features of Yellowstone National Park, the Secretary shall include in the report recommendations regarding the acquisition of the geothermal rights necessary to protect such thermal resources and features.

Subsection 8(d) provides that the Secretary may not issue, extend, renew or modify any geothermal lease or drilling permit pursuant to the Geothermal Steam Act of 1970 in the Corwin Springs Known Geothermal Resource Area until 180 days after the receipt by Congress of the study provided for in subsection 8(a) of this Act. This section is not to be construed as requiring leasing subsequent to the 180 days after study submittal

Section 9 of the bill amends the Geothermal Steam Act of 1970 by adding a new section 29 that provides that nothing contained in this Act shall affect the ban on leasing under the Geothermal Steam Act of 1970, as amended, with respect to the Island Park Geothermal Area, as designated by the map in the "Final Environmental Impact Statement of the Island Park Geothermal Area" (January 15, 1980. p. XI), and provided for in Public Law 98-473.

Section 10 provides that, to the extent that any provision in this Act is inconsistent with the provisions of Section 115(2) of Title I of section 101(h) of the Act Making Continuing Appropriations for Fiscal Year 1987, Public Law 99-591, 100 Stat. 4431-264 through 4431-266; this Act shall be deemed to supersede the provisions of such law.

Cost and Regulatory Considerations

The following estimate of costs of this measure has been provided by the Congressional Budget Office:

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, DC, February 3, 1988.

Hon. J. BENNETT JOHNSTON, Jr.
Chairman, Committee on Energy and Natural Resources,
U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has reviewed S. 1889, the Geothermal Steam Act Amendments, as ordered reported by the Senate Committee on Energy and Natural Resources on January 27, 1988. We estimate that enactment of S. 1889 would increase federal receipts by $1 million to $2 million annually over the 1989–1993 period. In addition, costs totaling about $500,000 would be incurred by the U.S. Geological Survey in 1989 and 1990.

S. 1889 would ease certain requirements for geothermal leases and would allow for extensions of federal leases for geothermal energy production provided certain requirements were met. The bill would also codify a list of 14 national park areas that have been determined to contain significant thermal features and are thus prohibited from geothermal leasing.

S. 1889 would also require the Nationl Park Service to establish a research and assessment program as part of its ongoing efforts to monitor geothermal resources. Finally, the bill would prohibit geothermal production, development and leasing in the Corwin Springs Known Geothermal Resources Area until 180 days after the Congress receives a report from the U.S. Geological Survey (due by December 1, 1990) on the impacts of such development.

Based on information from the Department of the Interior, CBO estimates that the lease extension provisions of the bill would result in increased federal receipts of $1 million to $2 million annually over the 1989–1993 period. These increases, in the form of additional rentals and bonus bids, would result from allowing current lessees to continue to hold leases that otherwise would expire, reducing lease relinquishments, and increasing the demand for new leases.

These receipts would be offset by additional costs to the federal government totaling approximately $500,000 in 1989 and 1990, primarily for the Geological Survey to complete the study of the Corwin Springs area. This estimate assumes that no drilling will be necessary as part of the study. We do not expect the bill to result in any other significant costs to the federal government or to state or local governments.

If you wish further details on this estimate, we will be pleased to provide them.

Sincerely,

JAMES L. BLUM,
Acting Director.

REGULATORY IMPACT EVALUATION

In compliance with paragraph 11(b) of Rule XXVI of the Standing Rules of the Senate, the Committee makes the following evaluation of the regulatory impact which would be incurred in implementing S. 1889. The bill is not a regulatory measure in the sense

of imposing Government-established standards or significant economic responsibilities on private individuals and businesses.

No personal information would be collected in administering the program. Therefore, there would be no impact on personal privacy.

Little, if any, additional paperwork would result from the enactment of S. 1889, as amended.

Executive Communications

On June 3, 1987, the Committee on Energy and Natural Resources requested legislative reports from the Department of the Interior and the Office of Management and Budget setting forth executive views on S. 1006. These reports had not been received at the time this report was filed. When the reports become available, the chairman will request that they be printed in the Congressional Record for the advice of the Senate.

The Committee did not request Executive agency views on S. 1889.

Following is the Department of the Interior's statement at the July 14, 1987, hearing.

> Statement of Robert H. Lawton, Deputy Assistant Director, Energy and Mineral Resources, Bureau of Land Management, Department of the Interior, Before the Subcommittee on Natural Resources Development and Production, Committee on Energy and Natural Resources, U.S. Senate, on S. 1006, a Bill Entitled "The Geothermal Steam Act Amendments of 1987".
>
> I appreciate the opportunity to appear before the Subcommittee today to discuss the Department of the Interior's position on S. 1006.
>
> S. 1006 would be cited as the "Geothermal Steam Act Amendments of 1987."
>
> Section 2 of S. 1006 would define "substantial investment" as expenditures for well-drilling, geological, geochemical, and geophysical surveys, environmental studies, architectural and engineering services used in designing generating facilities, and other expenditures approved by the Secretary.
>
> Sections 3, 4, and 5 of S. 1006 would amend sections 6 (a), (c), and (d) of the Geothermal Steam Act of 1970 to provide that if geothermal steam is produced or utilized in commercial quantities on a lease or under an approved cooperative or unit plan of development or operation in which a lease is included within the 10 year primary term or any administrative extension thereof, the lease would continue for as long as geothermal steam is produced or utilized in commercial quantities. The continuation could not exceed an additional 40 years. A geothermal lease in effect on or after the date of enactment of S. 1006 would be extended for successive 5-year periods, for a total of not more than 15 years, if the lessee has submitted a report detailing bona fide efforts to bring the lease into commer-

cial production, and either (1) commenced drilling operations to a depth specified by the Secretary prior to the end of the primary term and each 5-year extension period on such lease or another lease sharing a common geothermal resource, or (2), in the opinion of the Secretary, made substantial investment, as defined in section 2, during the primary lease term and each extension on such lease or another lease sharing a common geothermal resource. When the drilling or investment occurs on another lease, at least one party would be required to have an interest in both leases.

Section 6 of S. 1006 would amend section 18 of the Geothermal Steam Act by adding a new paragraph requiring that 5 years after approval of any cooperative or unit plan of development or operation, and every 5 years thereafter, the Secretary must review each plan and, after notice and opportunity for comment, eliminate from inclusion in such plan any lease or part of a lease not regarded as reasonably necessary to cooperative or unit operations under the plan. Such elimination would have to be based on scientific evidence, and be for the purpose of conserving and properly managing the geothermal resource. A lease or part of a lease so eliminated would be eligible for extension if it separately met the requirements for extension.

Section 7 of S. 1006 would require the Secretary to include stipulations protecting significant thermal features in all lease extensions and renewals as well as in all new leases.

We support enactment of S. 1006.

The Geothermal Steam Act presently allows a geothermal lease to continue beyond its 10-year primary term in only two situations: either the lease must be producing, or there must be both a well capable of production and a sales contract for delivery or utilization of the shut-in production, with utilization scheduled to commence within 15 years of the effective date of the lease. S. 1006 would eliminate the requirement that there be a contract for delivery or utilization.

We support this change for two reasons. First, with the current oversupply of electrical generating capacity, it is difficult for Federal geothermal lessees to market their production at any price. Second, Federal lessees are at a disadvantage when sales contracts are negotiated inasmuch as they operate under a time constraint. If the lessees do not execute contracts, regardless of how unfavorable the terms may be, they may lose their leases. The amendment would eliminate the lease termination problem when a contract cannot be made within 15 years. Without this change, we anticipate that in the near future there will be many relinquishments of existing leases and little demand for new ones.

S. 1006 also would liberalize the conditions under which geothermal leases could be extended. Currently, a lease can be extended only once, and only if actual drilling oper-

ations are being diligently pursued at the time expiration would otherwise occur. S. 1006 would allow up to three successive 5-year extensions provided either that drilling had commenced to a depth specified by the Secretary, or that substantial expenditures had been made. As a result, serious developers will be rewarded with additional time to make discoveries. The public interest is well served by keeping leases in the hands of lessees who have already sunk costs in leaseholds and would have strong incentive to establish production.

We also believe the bill should be modified to clear up one apparent inconsistency in language between section 3 and section 6, in that section 6 would amend section 18 of the Act to direct that leases be eliminated from units if they are no longer necessary for unit operations, while section 3 would amend section 6(a) to protect leases from expiration if they are within a producing unit or one that is capable of production. We suggest that this apparent inconsistency be clarified by adding to section 18 the statement that leases may be eliminated notwithstanding the provisions of 6(a).

We also suggest one technical amendment. Section 2 of the bill should be amended by changing the word "means" to "includes" in the new paragraph (f) to be added to section 2 of the Geothermal Steam Act of 1970. As written, the paragraph would not define "substantial", but would merely list expenditures to be considered, and section 4 of the bill, in paragraph (c)(2)(iii), would make it clear that the Secretary of the Interior decides whether the investment is substantial.

This concludes my statement. I will be pleased to answer questions.

Changes in Existing Law

In compliance with paragraph 12 of Rule XXVI of the Standing Rules of the Senate, the Committee notes the following changes in existing law made by the Geothermal Steam Act Amendment, as reported (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, and existing law in which no change is proposed is shown in roman):

Geothermal Steam Act of 1970

(84 Stat. 1566)

* * * * * * *

Sec. 2. (a) "Secretary" means the Secretary of the Interior;

(b) "geothermal lease" means a lease issued under authority of this Act;

(c) "geothermal steam and associated geothermal resources" means (i) all products of geothermal processes, embracing indigenous steam, hot water and hot brines; (ii) steam and other gases, hot water and hot brines resulting from water, gas, or other fluids artificially introduced into geothermal formations; (iii) heat or

other associated energy found in geothermal formations; and (iv) any byproduct derived from them;

(d) "byproduct" means any mineral or minerals (exclusive of oil, hydrocarbon gas, and helium) which are found in solution or in association with geothermal steam and which have a value of less than 75 per centum of the value of the geothermal steam or are not, because of quantity, quality, or technical difficulties in extraction and production, of sufficient value to warrant extraction and production by themselves;

(e) "known geothermal resources area" means an area in which the geology, nearby discoveries, competitive interests, or other indicia would, in the opinion of the Secretary, engender a belief in men who are experienced in the subject matter that the prospects for extraction of geothermal steam or associated geothermal resources are good enough to warrant expenditures of money for that purpose.

(f) "substantial investment" means expenditures at an amount per acre as specified by the Secretary. Such expenditures shall be made on one or more of the following: drilling exploratory, development, or temperature gradient wells; geological, geochemical, or geophysical surveys; environmental studies; architectural and engineering services procured in connection with design of generating facilities; or other expenditures approved by the Secretary;

(g) "significant thermal features within units of the National Park System" shall include, but not be limited to, the following:

(1) thermal features within units of the National Park System designated as significant in the Federal Register notice of August 3, 1987 (vol. 52, No. 148, Fed. Reg. 28790); and

(2) Crater Lake National Park.

* * * * * * *

SEC. 6. [(a) Geothermal leases shall be for a primary term of ten years. If geothermal steam is produced or utilized in commercial quantities within this term, such lease shall continue for so long thereafter as geothermal steam is produced or utilized in commercial quantities, but such continuation shall not exceed an additional forty years.]

(a) Geothermal leases shall be for a primary term of ten years. If geothermal steam is produced or utilized in commercial quantities within this term, or any administrative extension thereof as provided under subsection (c), such lease shall continue for so long thereafter as geothermal steam is produced or utilized in commercial quantities, but such continuation shall not exceed an additional forty years.

(b) If, at the end of such forty years, steam is produced or utilized in commercial quantities and the lands are not needed for other purposes, the lessee shall have a preferential right to a renewal of such lease for a second forty-year term in accordance with such terms and conditions as the Secretary deems appropriate.

(c)*(1)* Any lease for land on which, or for which under an approved cooperative or unit plan of development or operation, actual drilling operations were commenced prior to the end of its primary term and are being diligently prosecuted at that time shall be extended for five years and so long thereafter, but not more than

thirty-five years, as geothermal steam is produced or utilized in commercial quantities. If, at the end of such extended term, steam is being produced or utilized in commercial quantities and the lands are not needed for other purposes, the lessee shall have a preferential right to a renewal of such lease for a second term in accordance with such terms and conditions as the Secretary deems appropriate.

(c)(2) Any geothermal lease issued pursuant to this Act and in effect on or after the date of enactment of the Geothermal Steam Act Amendments shall be extended for successive five-year periods, but totaling not more than fifteen years, if—

(i) the lessee has submitted a report to the Secretary detailing bona fide efforts to bring such lease or approved cooperative or unit plan of development into commercial production, given the then current economic conditions, and either;

(ii) actual drilling operations, to a depth specified by the Secretary, were commenced prior to the end of its primary term and prior to the end of each successive five-year extension period and such drilling operations have not been used in obtaining a prior extension on any other lease and are being actively pursued on the lease to be extended or on another lease where, at the time application for extension is made and such drilling occurs, such leases are included in the same approved cooperative or unit plan of development or operation; or

(iii) in the opinion of the Secretary, substantial investment has been made during the primary term and during each successive five-year extension on such lease or on another lease where, at the time the substantial investment is made, such leases are included in the same approved cooperative or unit plan of development or operation and such expenditures have not been used to obtain an extension on any other lease.

[(d) For purposes of subsection (a) of this section, production or utilization of geothermal steam in commercial quantities shall be deemed to include the completion of one or more wells producing or capable of producing geothermal steam in commercial quantities and a bona fide sale of such geothermal steam for delivery to or utilization by a facility or facilities not yet installed but scheduled for installation not later than fifteen years from the date of commencement of the primary term of the lease.]

(d) For purposes of subsection (a) of this section, the term "produced or utilized in commercial quantities" includes the completion of a well capable of producing geothermal steam in commercial quantities.

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SEC. 18. For the purpose of properly conserving the natural resources of any geothermal pool, field, or like area, or any part thereof, lessees thereof and their representatives may unite with each other, or jointly or separately with others, in collectively adopting and operating under a cooperative or unit plan of development or operation of such pool, field, or like area, or any part thereof, whenever this is determined and certified by the Secretary to be necessary or advisable in the public interest. The Secretary may in his discretion and with the consent of the holders of leases

involved, establish, alter, change, revoke, and make such regulations with reference to such leases in connection with the institution and operation of any such cooperative or unit plan as he may deem necessary or proper to secure reasonable protection of the public interest. He may include in geothermal leases a provision requiring the lessee to operate under such a reasonable cooperative or unit plan, and he may prescribe such a plan under which such lessee shall operate, which shall adequately protect the rights of all parties in interest, including the United States. Any such plan may, in the discretion of the Secretary, provide for vesting in the Secretary or any other person, committee, or Federal or State agency designated therein, authority to alter or modify from time to time the rate of prospecting and development and the quantity and rate of production under such plan. All leases operated under any such plan approved or prescribed by the Secretary shall be excepted in determining holdings or control for the purposes of section 7 of this Act.

No more than five years after approval of any cooperative or unit plan of development or operation, and at least every five years thereafter, the Secretary shall review each such plan and, after notice and opportunity for comment, eliminate from inclusion in such plan any lease or part of a lease not regarded as reasonably necessary to cooperative or unit operations under the plan: Provided, That such elimination is based on scientific evidence, and occurs only when it is determined by the Secretary to be for the purpose of conserving and properly managing the geothermal resource. Any lease or part of a lease so eliminated would be eligible for an extension under section 6(c) of this title within two years if it separately meets the requirements for such an extension.

When separate tracts cannot be independently developed and operated in conformity with an established well-spacing or development program, any lease, or a portion thereof, may be pooled with other lands, whether or not owned by the United States, under a communitization or drilling agreement providing for an apportionment of production or royalties among the separate tracts of land comprising the drilling or spacing unit when determined by the Secretary to be in the public interest, and operations or production pursuant to such an agreement shall be deemed to be operations or pruduction as to each lease committed thereto.

The Secretary is hereby authorized, on such conditions as he may prescribe, to approve operating, drilling, or development contracts made by one or more lessees of geothermal leases, with one or more persons, associations, or corporations whenever, in his discretion, the conservation of natural products or the public convenience or necessity may require or the interests of the United States may be best served thereby. All leases operated under such approved operating, drilling, or development contracts, and interests thereunder, shall be expected in determining holdings or control under section 7 of this Act.

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SEC. 28. (a) The Secretary shall maintain a monitoring program for significant thermal features within units of the National Park System.

(b) As part of the monitoring program required by subsection (a) of this section, the Secretary shall establish a research program to collect and assess data on the geothermal resources within units of the National Park System with significant thermal features. Such program shall begin with the collection and assessment of data for significant features near current or proposed geothermal development.

(c) Upon receipt of an application for a geothermal lease the Secretary shall determine on the basis of scientific evidence if exploration, development, or utilization of the lands subject to the geothermal lease application is reasonably likely to result in a significant adverse effect on a significant thermal feature within units of the National Park System. Such determination shall be subject to notice and public comment. If the Secretary determines on the basis of scientific evidence that the exploration, development or utilization of the land subject to the geothermal lease application is reasonably likely to result in a significant adverse effect on a significant thermal feature within units of the National Park System, the Secretary shall not issue such geothermal lease. In addition, the Secretary shall withdraw from leasing under this Act those lands, or portion thereof, subject to the application for geothermal lease, the exploration, development, or utilization of which is reasonably likely to result, based on the Secretary's determination, in a significant adverse effect on a significant thermal feature within units of the National Park System.

(d) With respect to all geothermal leases and drilling permits issued, extended, renewed or modified, the Secretary shall include stipulations in leases and in drilling permits necessary to protect significant thermal features within units of the National Park System where a determination is made based on scientific evidence that the exploration, development, or utilization of the lands subject to the lease or drilling permit is reasonably likely to adversely affect such significant features. Such stipulations shall include, but are not limited to:

(1) requiring the lessee to reinject geothermal fluids into the rock formations from which they originate;

(2) requiring the lessee to report annually to the Secretary on its activities;

(3) requiring the lessee to continuously mointor geothermal production and injection wells; and

(4) requiring the lessee to suspend activity, temporarily or permanently, on the lease if the Secretary determines that ongoing exploration, development, or utilization activities are having a significant adverse effect on significant thermal features within units of the National Park System until such time as the significant adverse effect is eliminated.

(e) The Secretary of Agriculture shall consider the effects on significant thermal features within units of the National Park System in determining whether to consent to leasing under this Act on national forest or other lands administered by the Department of Agriculture available for leasing under this Act, including public, withdrawn, and acquired lands.

SEC. 29. Nothing contained in this Act shall affect the ban on leasing under this Act with respect to the Island Park Geothermal Area, as designated by the map in the "Final Environmental Impact Statement of the Island Park Geothermal Area" (January 15, 1980. p. XI), and provided for in Public Law 98-473.

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Calendar No. 542

100TH CONGRESS
2d Session

SENATE

REPORT
100-288

BLACK REVOLUTIONARY WAR PATRIOTS MEMORIAL

FEBRUARY 22 (legislative day, FEBRUARY 15), 1988.—Ordered to be printed

Mr. JOHNSTON, from the Committee on Energy and Natural Resources submitted the following

REPORT

[To accompany S.J. Res. 216]

The Committee on Energy and Natural Resources to which was referred the joint resolution (S.J. Res. 216) approving the location of the Black Revolutionary War Patriots Memorial, having considered the same, reports favorably thereon without amendment and recommends that the joint resolution do pass.

PURPOSE OF THE MEASURE

The purpose of S.J. Res. 216 is to approve the recommendation of the Secretary of the Interior to locate the Black Revolutionary War Patriots Memorial in Area I, the area comprising the District of Columbia's central monumental core as defined by Public Law 99-652.

BACKGROUND AND NEED

Last year, the Congress enacted Public Law 99-652, an act to provide standards for placement of commemorative works on certain Federal lands in the District of Columbia and its environs. This legislation set forth specific standards and criteria for the authorization, siting and design of memorials on Federal lands in the District.

In most instances, memorials are authorized by the Congress to be constructed on Federal lands in the District without specifc reference to where in the District they are to be located. That decision is made later by the Secretary of the Interior or the Administrator of the General Services Administration, as appropriate, using the

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criteria outlined in Public Law 99-652, and in consultation with the National Capital Memorial Commission.

The legislation specifies that the Secretary or the Administrator can agree to locate commemorative works in "Area I" only if the subject of such work is found to be of "preeminent historical and lasting significance to the Nation." Area I includes the city's central monumental core: the Mall, the Ellipse, the Washington Monument Grounds, West Potomac Park, Theodore Roosevelt Island and Lady Bird Johnson Park.

Should the Secretary or the Administrator make such a finding, there is an additional step. That recommendation must be submitted to the Congress for approval. Unless the Congress enacts legislation within 150 days concurring in such a determination, the Secretary's recommendation is deemed disapproved. This procedure for Congressional approval was included in recognition of the fact that sites in Area I are rapidly disappearing and that decisions to site memorials in this area should receive special review from the Congress.

On November 9, 1987, the Secretary of the Interior transmitted the first such recommendations to the Congress regarding the Black Revolutionary War Patriots Memorial. The Secretary, with the concurrence of the National Capital Memorial Commission, has determined that this commemorative work, authorized in the 99th Congress, be located in Area I. Further decisions about the specific design and location of the memorial within Area I will be made at a later date by the National Capital Memorial Commission, the Commission of Fine Arts, the National Capital Planning Commission, and the Secretary of the Interior.

S.J. Res. 216 provides Congressional approval of this decision by the Secretary.

LEGISLATIVE HISTORY

S.J. Res. 216 was introduced, by request, on November 10, 1987. No hearing has been held on the Secretary's Area I recommendation; however, a hearing was held during the 99th Congress on the authorizing legislation for the Black Revolutionary Patriots Memorial.

At a business meeting on February 17, 1988, the Senate Committee on Energy and Natural Resources ordered S.J. Res. 216, favorably reported.

COMMITTEE RECOMMENDATIONS AND TABULATION OF VOTES

The Senate Committee on Energy and Natural Resources, in open business session on February 17, 1988, by unanimous voice vote of a quorum present, recommends that the Senate pass S.J. Res. 216, as described herein.

COST AND BUDGETARY CONSIDERATIONS

The Congressional Budget Office estimate of the costs of this measure has been requested but was not received at the time the report was filed. When the report is available, the Chairman will

request it to be printed in the Congressional Record for the advice of the Senate.

REGULATORY IMPACT EVALUATION

In compliance with paragraph 11(b) of Rule XXVI of the Standing Rules of the Senate, the Committee makes the following evaluation of the regulatory impact which would be incurred in carrying out S.J Res. 216. The resolution is not a regulatory measure in the sense of imposing Government-established standards or significant economic responsibilities on private individuals and businesses.

No personal information would be collected in administering the program. Therefore, there would be no impact on personal privacy.

Little, if any, additional paperwork would result from the enactment of S.J. Res. 216, as reported.

EXECUTIVE COMMUNICATIONS

The pertinent legislative report received by the Committee from the Department of the Interior setting forth executive agency recommendations relating to S.J. Res. 216 is set forth below:

THE SECRETARY OF THE INTERIOR,
Washington, DC, November 9, 1987.

Hon. GEORGE BUSH,
President of the Senate,
Washington, DC.

DEAR MR. PRESIDENT: The Joint Resolution approved October 27, 1986 (100 Stat. 3144), authorizes the Black Revolutionary War Patriots Foundation to establish a memorial on Federal land in the District of Columbia and its environs to honor the slaves and free black persons who served as soldiers and sailors or provided civilian assistance during the American Revolution and to honor the black men, women, and children who ran away from slavery or filed petitions with courts and legislatures seeking their freedom.

The Black Revolutionary War Patriots Foundation has proposed that the memorial be located in Area I, the area comprising the central monumental core of the District of Columbia and its environs, which is defined by the Act approved November 14, 1986 (100 Stat. 3650). Section 6(a) of that Act provides that the Secretary of the Interior may approve the location of a commemorative work in Area I only if he finds that the subject to the work is of preeminent historical and lasting significance to the Nation. That section further provides that the Secretary, after consultation with the National Capital Memorial Commission, shall notify the Congress of his determination that a commemorative work should be located in Area I; and the location in Area I shall be deemed disapproved unless within 150 days of the notification it is approved by law.

At its fourth meeting on June 16, 1987, the National Capital Memorial Commission recommended to me that the Black Revolutionary War Patriots Foundation memorial be located in Area I. Because this proposed memorial represents a significant part of the fundamental military struggle that gave birth to the United States as a separate and free Nation, I find the subject to be of preemi-

nent historical and lasting significance to the Nation, and I have determined that the Black Revolutionary War Patriots Foundation memorial, authorized by the Joint Resolution approved October 27, 1986, should be located in Area I.

In accordance with section 6(a) of the Act November 14, 1986 (100 Stat. 3650, 3651), notice is hereby given that I have approved the location of this proposed memorial in Area I, that through my designee I have consulted with the National Capital Memorial Commission, and that I have determined that the memorial should be located in Area I. Under section 6(a) of that Act, the location in Area I shall be deemed disapproved unless the location is approved by law not later than 150 days after this notification.

Enclosed is a draft of a joint resolution which, if enacted within 150 days, would have the effect of approving the location of this memorial in Area I. We recommend that it be introduced and referred to the appropriate Committee for consideration, and we recommend its timely enactment.

The Office of Management and Budget has advised that there is no objection to the enactment of the enclosed draft joint resolution from the standpoint of the Administration's program.

Sincerely,

DONALD PAUL HODEL.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of Rule XXVI of the Standing Rules of the Senate, the Committee notes that no changes in existing law are made by the resolution, S.J. Res. 216, as reported.

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